AMENDED SPECIFICATION.

Reprinted as amended under Section 8 of the Patents & Designs Act, 1907.

N° 16,405 A.D. 1909

Date of Application, 14th July, 1909

Complete Specification Left, 14th Jan., 1910—Accepted, 14th July, 1910

PROVISIONAL SPECIFICATION.

A Combined Massaging and Magneto-electric Machine.

I, Fred Burks, of 37, Port Street, Manchester, Electrician, do hereby declare the nature of the said invention to be as follows:—

This invention refers to and consists of a combined, self-contained and portable massaging and magneto-electric machine, the combination being such that simultaneously with the use of the machine for massaging electric currents are generated and caused to pass through the part being treated.

According to the invention use is, by preference, made of a magneto-electric machine similar to that covered by Application No. 8489, A.D. 1909, or of a like machine, and use is also, by preference, made of a roller, the axis of which is carried by extensions of the plates or bearings of the armature axis.

To one of the poles of the magnet is applied two spring contact plates, one of which extends to and presses upon the periphery of the roller and the other of which is bifurcated and presses upon the commutator and circuit breaker of the armature. The roller is insulated from its axis. Upon the roller axis is a large gear wheel, and upon the armature axis is a small gear wheel. Meshing with the two wheels is a further and medium sized wheel carried by a stud on the armature and roller bearing plate.

In using the improved machine the magnet part of the machine is taken hold of in one hand and the roller applied to the part to be massaged. The roller is then simultaneously pressed and rolled to and fro over the affected part, thereby causing the roller to revolve and through the gear wheels rotate the armature of the machine and generate the desired electric current. Owing to the roller being in circuit with the commutator and circuit breaker the pressing of the roller against the body and the grasping of the magnet in the hand completes the circuit.

With the machine thus made and used the current is felt in the hand as well as in the part being treated. To cause the current to be felt only in the part under treatment the roller may be made in two parts which although fastened together are insulated from each other. One part is also insulated from the roller axis, whilst the other part is in contact with the axis. The spring contact blade presses upon the insulated part of the pulley.

To the magnet is applied a wood or other non-conducting handle. With the machine thus modified the electric current does not pass through the hand, the circuit being completed when the two portions of the roller come against the part to be treated.

To protect the gear wheels the machine may be covered in, except for a small portion of the roller periphery, by a sheet metal or other suitable housing.

The magnet will preferably be made of cast iron rendered magnetic according to the invention covered by Application for Patent No. 5360 A.D. 1909.

[*Price* 8*d.*]

Whilst preferring the arrangement of gear wheels aforesaid for driving the armature, other and suitable means may be employed. Also in place of a metal roller any other and suitable massaging device may be used. There may also be more than one roller to one machine, or more than one magnet to one roller.

It will now be seen that by this invention a magneto-electric massaging machine is provided which is entirely self-contained, no batteries being needed and therefore no connecting wires being present, and the machine combining in one article the massaging tool and generator.

Dated this 13th day of July, 1909.

For the Applicant,
JOHN G. WILSON & Co.,
Chartered Patent Agents,
55, Market Street, Manchester.

COMPLETE SPECIFICATION (AMENDED).

A Combined Massaging and Magneto-electric Machine.

I, Fred Burks, of 37, Port Street, Manchester, Electrician, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement;—

This invention relates to a self-contained and portable magneto-electric massaging machine of the type in which a roller is mounted in a suitable frame with a handle attached and, in use, rotates a magneto-electric machine to produce an intermittent current which passes through the roller and through the part being massaged back to the machine. Such machines usually have the magneto-electric apparatus located within and driven by the roller.

This invention has for its object an improved arrangement and construction of such magneto-electric massaging machines.

According to the invention use is, by preference, made of a magneto-electric machine similar to that covered by Application No. 8489 A.D. 1909, or of a like machine, and use is also, by preference, made of a roller, the axis of which is carried by extensions of the plates or bearings of the armature axis. To one of the poles of the magnet is applied two spring contact plates, one of which extends to and presses upon the periphery of the roller and the other of which is bifurcated and presses upon the commutator and circuit breaker of the armature.

The roller is insulated from its axis. Upon the roller axis is a large gear wheel and upon the armature axis is a small gear wheel. Meshing with the two wheels is a further and medium sized wheel carried by a stud on the armature and roller bearing plate.

In using the improved machine the magnet part of the machine is taken hold of in one hand and the roller applied to the part to be massaged. The roller is then simultaneously pressed and rolled to and fro over the affected part, thereby causing the roller to revolve and through the gear wheels rotate the armature of the machine and generate the desired electric current. Owing to the roller being in circuit with the commutator and circuit breaker the pressing of the roller against the body and the grasping of the magnet in the hand completes the circuit.

With the machine thus made and used the current is felt in the hand holding the instrument as well as in the part under treatment. To cause the current to be felt only in the part under treatment the roller is made in two parts which although fastened together are insulated from each other.

One part is also insulated from the roller axis, whilst the other part is in contact with the axis. The spring contact blade presses upon the insulated part of the roller.

To the magnet is applied a wood or other non-conducting handle. With the machine thus modified the electric current does not pass through the hand, the circuit being completed when the two portions of the roller come against the part to be treated.

The two constructions of the improved massaging appliance are shown on the accompanying drawings, wherein,

Fig. 1 illustrates a side view,

Fig. 2 an edge view, and

Fig. 3 a sectional plan of the improved massaging appliance when constructed to give an electric current which is felt in the hand and in the part under treatment.

Fig. 4 illustrates a section of the roller used with such appliance.

Fig. 5 illustrates a side view, and

Fig. 6 a vertical cross-section of the improved massaging appliance when constructed to give a current only in the part under treatment.

Fig. 7 illustrates certain details respectively.

a is the permanent magnet, *b* the armature and *c* the massaging roller.

The armature and roller are supported in bearings or plates *e*, *e* secured to the magnet *a*, the poles of the magnet being preferably shaped to suit the contour of the armature which lies between them.

To one of the poles of the magnet is applied two spring contact plates *f*, f^1 the former of which extends to and presses upon the periphery of the roller *c*, the other f^1 being bifurcated and pressing upon the commutator *g* and circuit breaker g^1 of the armature *b*. The roller *c* is insulated from its axis c^1 by a bush or sleeve *h*.

Upon the axis c^1 is a large gear wheel *i* and upon the armature axis b^1 is a small gear wheel or pinion *j*.

Meshing with these two wheels *i*, *j*, and supported by a stud or pin on one of the plates or bearings *e*, is a further and medium sized wheel *k*. The handle *l* may be made integral with and of the same material as the magnet, see Fig. 1 and 2, but to avoid weight and clumsiness it is preferred to have a wood or other light handle, as shown in Figs. 5 and 6.

In the latter case the roller *c* is made in two parts fastened together, but insulated from each other, whilst one half of the roller is also insulated from the roller axis c^1, the other part being in contact with said axis, and the contact plate *f* pressing upon that half of the roller which is insulated.

In using the improved machine the handle *l* is taken hold of in one hand and the roller *c* applied to the part to be massaged. The roller is then simultaneously pressed and rolled to and fro over the affected part, thereby causing the roller *c* to revolve and, through the gear wheels, impart motion to the armature to generate the desired current.

Owing to the roller being in circuit with the commutator *g* and circuit breaker g^1 the pressing of it against the body and the grasping of the handle *l* in the hand completes the circuit.

In the example illustrated in Figs. 5 and 6 the circuit is completed when the divided roller makes contact with the part to be massaged, the handle in this case merely serving to manipulate the appliance and not as in Figs. 1 and 2 forming one of the terminals.

The non-conducting handle may be applied to the single roller form of appliance, in which case the spindle may be connected by a lateral conducting pin extending through to a metal or conducting band surrounding the handle.

To protect the gear wheels the machine may be covered in, except for a small portion of the roller periphery, by a sheet metal or other suitable housing, see Figs. 5 and 6.

A Combined Massaging and Magneto-electric Machine.

The magnet will preferably be made of cast iron rendered magnetic according to the invention covered by Application for Patent No. 5360 A.D. 1909.

Whilst preferring the arrangement of gear wheels aforesaid for driving the armature, other and suitable means may be employed. Also in place of a metal roller any other and suitable massaging device may be used. There may also be more than one roller to one machine, or more than one magnet to one roller.

Having now particularly described and ascertained the nature of the said invention, and in what manner the same is to be performed, I declare that what I claim is;—

1. A combined magneto and massaging appliance comprising a horse-shoe magnet, an armature rotatably mounted between the poles of the magnet, a massaging roller (in one or more parts) bearings or plates supported from the magnet and supporting the roller, an arrangement of gear wheels mounted between one of the bearing plates and magnet whereby the motion of the roller when rotated is transmitted to the magnet armature, and brushes or contact plates connecting the magnet and armature with the roller whereby a current is caused to pass through the roller and the object acted on, substantially as herein set forth.

2. In a combined magneto-electric machine and massaging appliance, the construction, arrangement and combination of parts herein described and illustrated on Figs. 1 to 4 of the accompanying drawings.

3. In a combined magneto-electric machine and massaging appliance, the construction, arrangement and combination of parts herein described and illustrated in Figs. 5 and 6 of the accompanying drawings.

Dated this 13th day of January, 1910.

For the Applicant,
JOHN G. WILSON & Co.,
Chartered Patent Agents,
55, Market Street, Manchester.

Reference has been directed, in pursuance of Section 8, Sub-section 2, of the Patents and Designs Act, 1907, to Specification No. 12,844 of 1909.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1911.

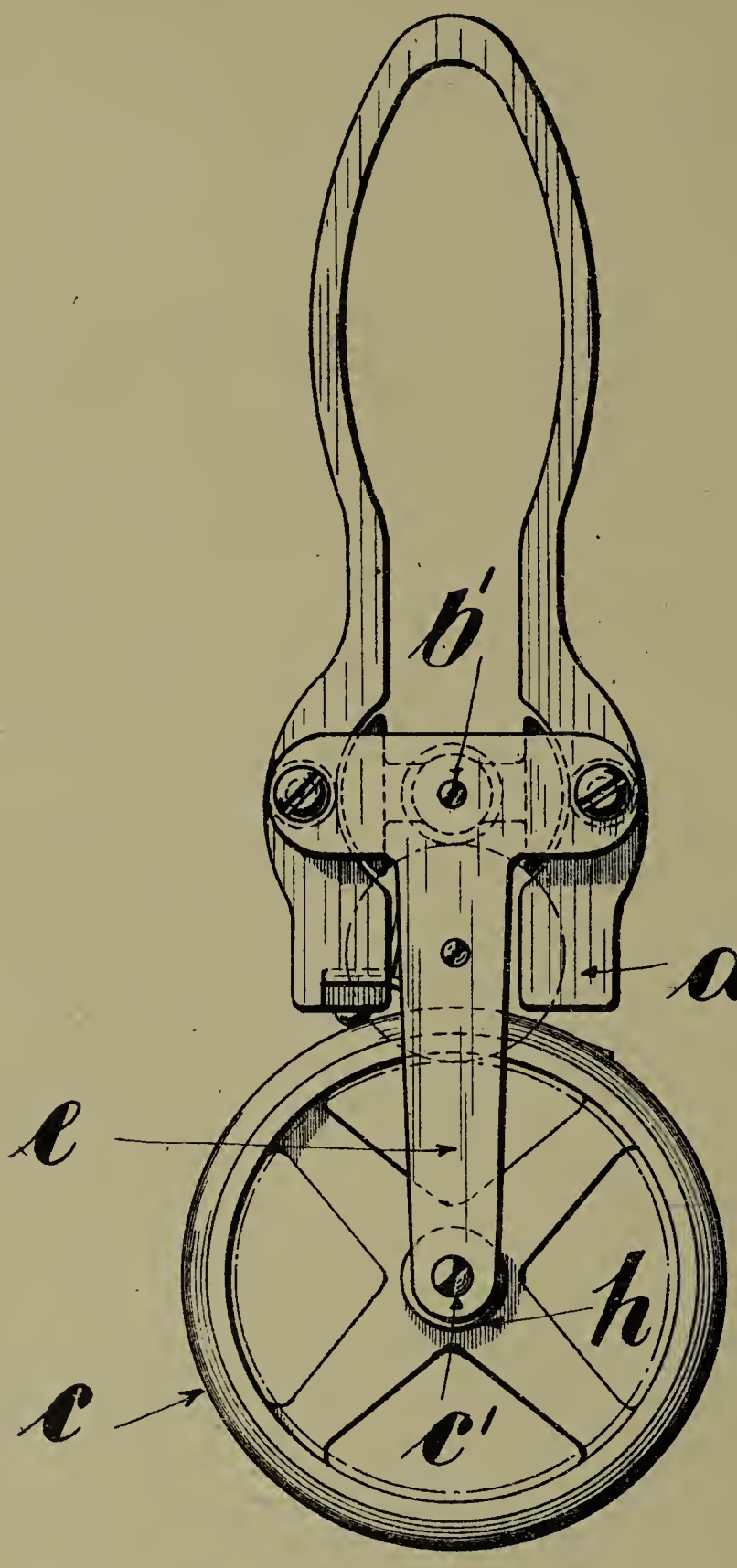

Fig. 1.

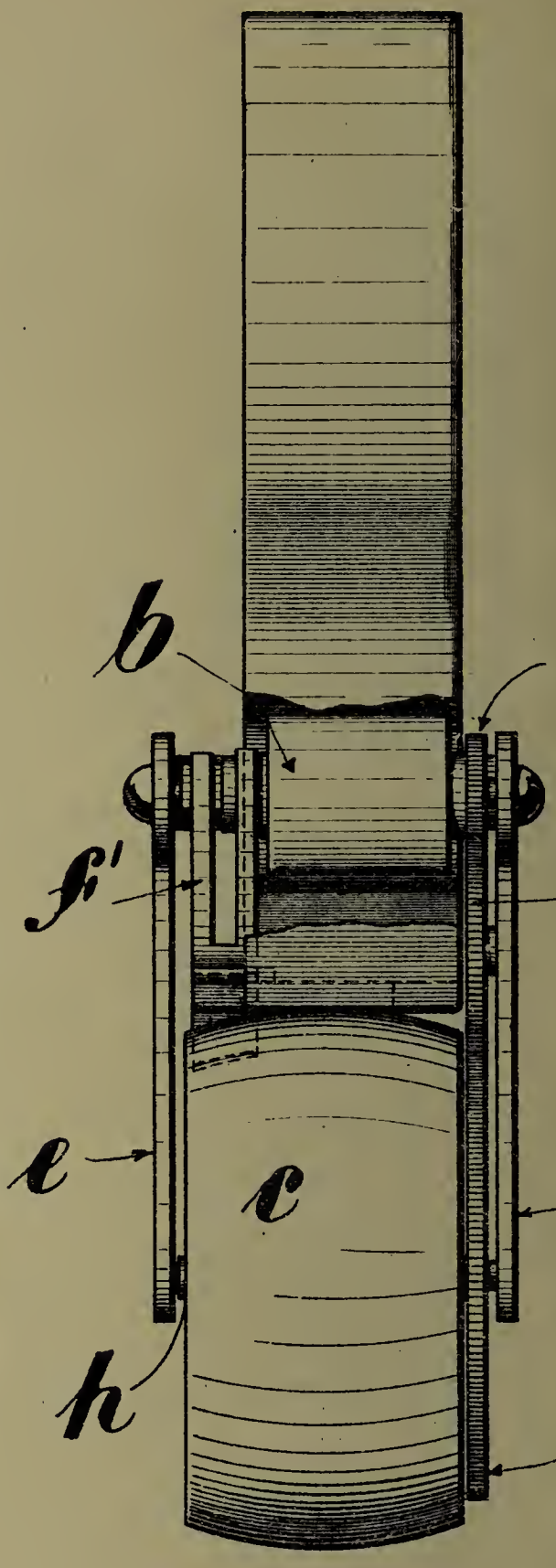

Fig. 2.

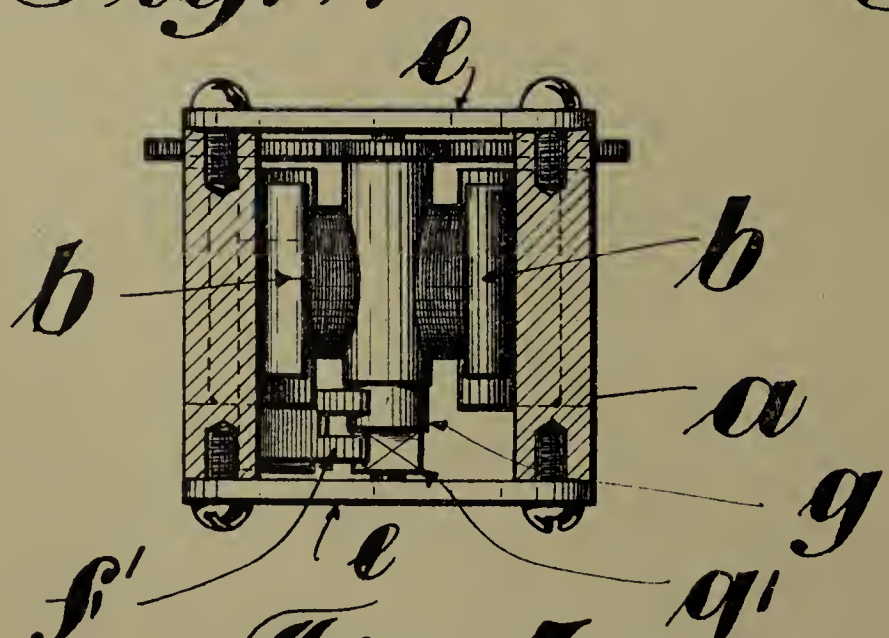

Fig. 3.

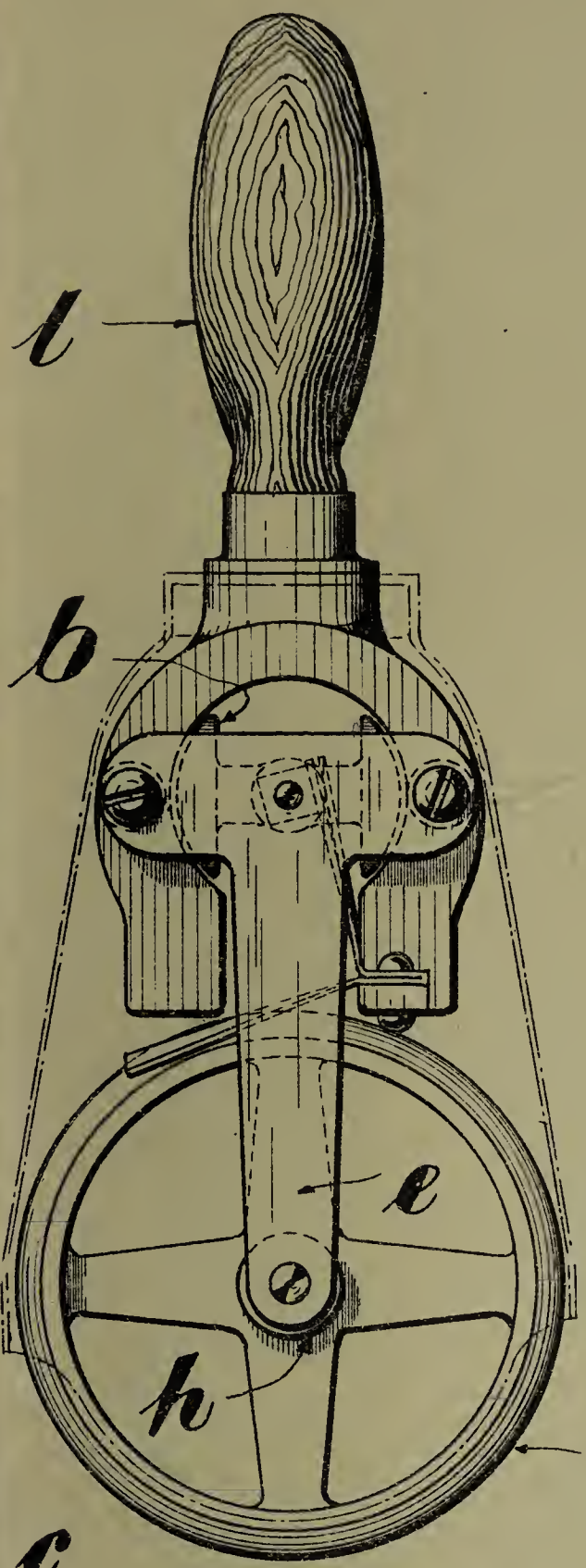

Fig. 5.

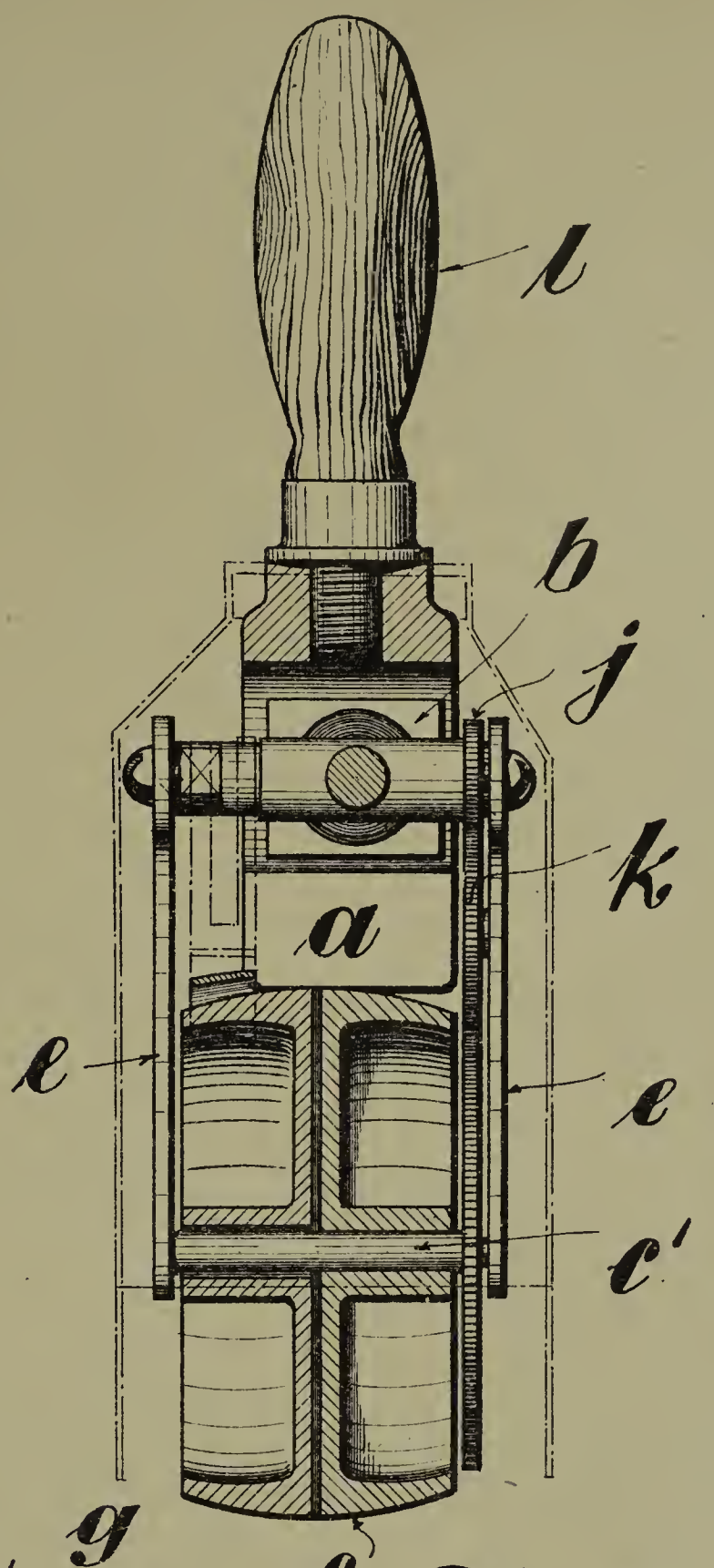

Fig. 6.

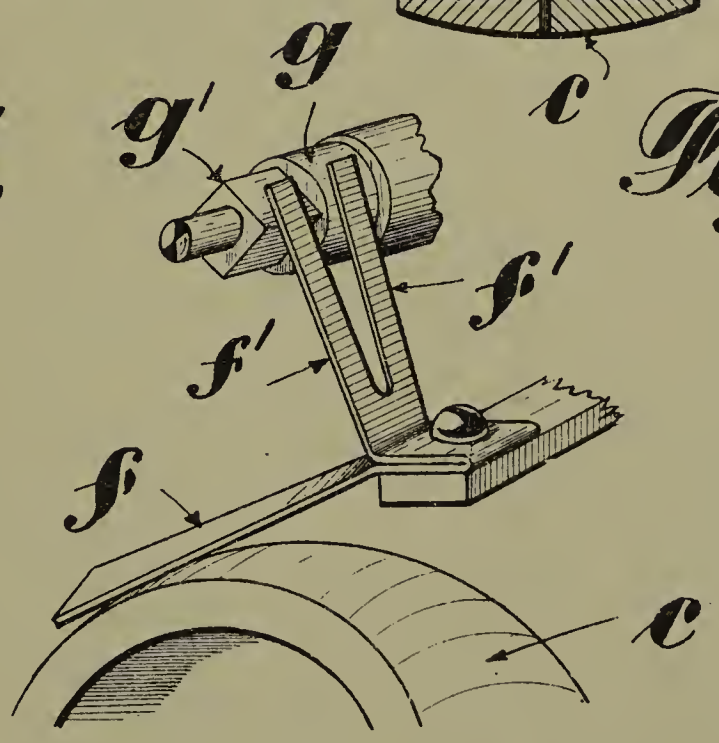

Fig. 7.

A.

Malby & Sons, Photo-Litho.